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=> s acyl-CoA:lysophospholipid acyltransferase and Caenorhabditis elegans
L1            2 ACYL-COA:LYSOPHOSPHOLIPID ACYLTRANSFERASE AND CAENORHABDITIS
                ELEGANS

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2            2 DUP REM L1 (0 DUPLICATES REMOVED)

=> d l2 1-2 ibib ab

L2   ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2006:656755  HCAPLUS  Full-text
DOCUMENT NUMBER:          145:140122
TITLE:                    Genes for lysolecithin acyltransferase sequence
                          homologs and their use in the manufacture of
                          polyunsaturated fatty acids in transgenic organisms
INVENTOR(S):              Cirpus, Petra; Bauer, Joerg; Heinz, Ernst; Abbadi,
                          Amine; Kirsch, Jelena
PATENT ASSIGNEE(S):       BASF Plant Science GmbH, Germany
SOURCE:                   PCT Int. Appl., 98 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     WO 2006069936         A2    20060706    WO 2005-EP56957         20051220
     WO 2006069936         A3    20070322
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
```

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

DE 102004062294	A1	20060706	DE 2004-102004062294	20041223
AU 2005321344	A1	20060706	AU 2005-321344	20051220
CA 2591599	A1	20060706	CA 2005-2591599	20051220
EP 1831358	A2	20070912	EP 2005-821795	20051220

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,
BA, HR, MK, YU

CN 101072869	A	20071114	CN 2005-80041980	20051220
PRIORITY APPLN. INFO.:			DE 2004-102004062294A	20041223
			WO 2005-EP56957 W	20051220

AB Genes for homologs of acyl-CoA:lysophospholipid-acyltransferases of algae are cloned and characterized for use in the development of transgenic organisms manufacturing long chain polyunsatd. fatty acids for food and therapeutic use. Cloning of a cDNA for the acyl-CoA: lysophospholipid-acyltransferase of Ostreococcus tauri using primers derived from the gene for the enzyme of Caenorhabditis elegans is described.

L2 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:	2004:857694 HCAPLUS Full-text
DOCUMENT NUMBER:	141:344590
TITLE:	Method for producing polyunsaturated fatty acids, lipids, and oils in transgenic organisms expressing fungal acyltransferases
INVENTOR(S):	Renz, Andreas; Bauer, Joerg; Frentzen, Margit; Soezer, Nursen; Keith, Stobart; Fraser, Thomas; Lazarus, Colin M.; Qi, Baoxiu; Abbadi, Amine; Heinz, Ernst
PATENT ASSIGNEE(S):	University of Bristol, UK
SOURCE:	PCT Int. Appl., 270 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	German
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004087902	A2	20041014	WO 2004-EP3224	20040326
WO 2004087902	A3	20050303		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,

TD, TG

AU 2004225838	A1	20041014	AU 2004-225838	20040326
CA 2520795	A1	20041014	CA 2004-2520795	20040326
EP 1613746	A2	20060111	EP 2004-723591	20040326
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
US 2006174376	A1	20060803	US 2005-552013	20050930
PRIORITY APPLN. INFO.:			DE 2003-10314759 A	20030331
			DE 2003-10348996 A	20031017
			WO 2004-EP3224 W	20040326

AB The invention relates to a method for the production of long-chained, multiply unsatd. fatty acids in an organism, wherein nucleic acids coding for proteins with acyltransferase activity are introduced into the organism. Said nucleic acid sequences can be advantageously expressed in the organism, optionally together with other nucleic acid sequences encoding enzymes involved in the biosynthesis of fatty acids or in lipid metabolism The invention also relates to a method for the production of oils and/or triacylglycerides with an increased content of long-chained, multiply unsatd. fatty acids. The invention further relates to the nucleic acid sequences, vectors containing the nucleic acid sequences, and transgenic organisms containing the above-mentioned nucleic acid sequences or vectors. The invention addnl. relates to oils, lipids and/or fatty acids produced according to the inventive method and to the utilization thereof in feed, food, cosmetics, and pharmaceuticals. Thus, lysophosphatidic acid acyltransferase, glycerol-3-phosphate acyltransferase, diacylglyerol acyltransferase, and lecithin-cholesterol acyltransferase of Thraustochytrium, Physcomitrella patens, Cryptothecodinium cohnii, Mortierella alpina, Shewanella hanedai, and Fusarium graminearum and the corresponding cDNAs are disclosed. Acyl CoA: lysophospholipid acyltransferase cDNAs of Caenorhabditis elegans were cloned, sequenced, and expressed in yeast, tobacco, and flax and the alteration of the lipid profile was determined The fungal acyltransferases were expressed in A. thaliana, tobacco, flax, and rape.

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=>  s acyl-CoA:lysophospholipid acyltransferase and dna
L3            1 ACYL-COA:LYSOPHOSPHOLIPID ACYLTRANSFERASE AND DNA

=> d l3 ibib ab

L3    ANSWER 1 OF 1  BIOTECHDS COPYRIGHT 2007 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2007-14918  BIOTECHDS  Full-text
TITLE:            Preparation of delta 5-unsaturated fatty acid compounds in an
                  organism, useful in e.g. food industry sector, comprises
                  introducing into an organism, lipid compounds and a nucleic
                  acid sequence; and expressing the nucleic acid sequence;
                     involving vector-mediated gene transfer and expression in
                     host cell
AUTHOR:           NAPIER J A; SAYANOVA O; ZANK T
PATENT ASSIGNEE:  BASF PLANT SCI GMBH
PATENT INFO:      EP 1790731 30 May 2007
APPLICATION INFO: EP 2006-124663 23 Nov 2006
PRIORITY INFO:    GB 2006-12109 19 Jun 2006; GB 2005-23915 24 Nov 2005
DOCUMENT TYPE:    Patent
LANGUAGE:         English
OTHER SOURCE:     WPI: 2007-435839 [42]
AB     DERWENT ABSTRACT:
       NOVELTY - Preparation of delta 5-unsaturated fatty acid compounds (I) in an
       organism, comprises introducing into an organism, lipid compounds (III), and
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at least one nucleic acid sequence (A); and expressing the nucleic acid sequence.

DETAILED DESCRIPTION - Preparation of delta 5-unsaturated fatty acid compounds (I) (R1-C(=O)-(CH2)3-CH=CH-Ya) in an organism, comprises introducing into an organism, lipid compounds (III) of formula (R1-C(=O)-(CH2)3-CH2-CH2-Ya), and at least one nucleic acid sequence comprising SEQ ID Number 1, 3 or 5 (comprising one of 3 fully defined amino acid 939-1131 base pair sequences given in the specification), a nucleic acid sequence, which hybridizes under stringent conditions with a nucleic acid sequence of SEQ ID Number 1, 3 or 5, a nucleic acid sequence which encodes a polypeptide of SEQ ID Number 2, 4 or 6 or a derivative of a nucleic acid sequence of SEQ ID Number 1, 3 or 5, which encodes a polypeptide with at least 40% identity at the amino acid level with SEQ ID Number 2, 4 or 6 (comprising one of 3 fully defined amino acid 312-376 base pair sequences given in the specification), where the polypeptide has Delta5-desaturase activity; and expressing the nucleic acid sequence. Ya = 10-18C hydrocarbon chain containing up to four carbon-carbon double bonds; R1 = OH, coenzyme A (thioester), lysophosphatidylcholine, lysophosphatidylethanolamine, lysophosphatidylglycerol, lysodiphosphatidylglycerol, lysophosphatidylserine, lysophosphatidylinositol, sphingo base or a radical of formula R2-O-CH2-CH(-O-R3)-CH2-O-; either R2 = H, lysophosphatidyl choline, lysophosphatidylethanolamine, lysophosphatidylglycerol, lysodiphosphatidylglycerol, lysophosphatidylserine, lysophosphatidylinositol or optionally saturated 2-24C-alkylcarbonyl; and R3 = H, optionally saturated 2-24C-alkylcarbonyl; or R2, R3 = a radical of the formula -C(=O)-(CH2)n-(CH=CH-CH2)m-(CH2)p-CH3; n = 2-7 or 9; m = 2-6; and p = 0 or 3. An oxygen in the R1 radical may be replaced by sulfur such that is bonded to the remainder of the molecule via a thioester linkage. INDEPENDENT CLAIMS are included for: (1) the preparation of sciadonic acid, juniperonic acid or their derivatives in an organism, which comprises linoleic (18C:2 n-6) or linolenic (18C:3 n-3) acid, comprising introducing into an organism (A) having at least one nucleic acid sequence encoding a polypeptide having delta9 elongase activity; and expressing the nucleic acid sequences;(2) oil, lipid or fatty acid, or their fractions, produced by the process; (3) an oil, lipid or fatty acid composition comprising the oil, lipid or fatty acid, which is derived from transgenic plants; (4) a process for the production of oils, lipids or fatty acid compositions by mixing the oils, lipids or fatty acids with animal oils, lipids or fats; (5) an isolated nucleic acid sequence, which encodes a polypeptide with Delta5-desaturase activity and is SEQ ID Number 1, 3 or 5; (6) a derivative of a nucleic acid sequence of SEQ ID Number 1, 3 or 5, which encodes a polypeptide with at least 40% identity at the amino acid level with SEQ ID Number 2, 4 or 6, where the polypeptide has Delta5-desaturase activity; (7) an amino acid sequence which is encoded by the nucleic acid sequence; (8) a nucleic acid construct comprising the nucleic acid sequence, operably linked with one or more regulatory sequences; (9) a vector comprising the nucleic acid or a gene construct; and (10) a transgenic non human organism comprising at least one nucleic acid, the gene construct or the vector. BIOTECHNOLOGY - Preferred Components: The nucleic acid sequence encoding a polypeptide having Delta9 elongase activity comprises a sequence encoding the 18C-Delta9 elongase from Isochrysis galbana (SEQ ID Number 25 (comprising a fully defined 777 base pair sequence given in the specification)) or Acanthamoeba Casterllanii (SEQ ID Number 24 (comprising a fully defined 891 base pair sequence given in the specification)). The transgenic organism is a transgenic microorganism or a transgenic plant. The transgenic organism is an oil-producing plant, a vegetable plant or an ornamental. The transgenic plant is a plant family of Adelotheciaceae, Anacardiaceae, Asteraceae, Apiaceae, Betulaceae, Boraginaceae, Brassicaceae, Bromeliaceae, Caricaceae, Cannabaceae, Convolvulaceae, Chenopodiaceae, Crypthecodiniaceae, Cucurbitaceae, Ditrichaceae, Elaeagnaceae, Ericaceae, Euphorbiaceae, Fabaceae, Geraniaceae, Gramineae, Juglandaceae, Lauraceae,

Leguminosae, Linaceae or Prasinophyceae. The nucleic acid construct comprises additional biosynthesis genes of the fatty acid or lipid metabolism such as acyl-coenzyme A dehydrogenase(s), acyl-acyl carrier protein (ACP) desaturase(s), acyl-ACP thioesterase(s), fatty acid acyltransferase(s), acyl-CoA: lysophospholipid acyltransferase(s), fatty acid synthase(s), fatty acid hydroxylase(s), acetyl-coenzyme A carboxylase(s), acylcoenzyme A oxidase(s), fatty acid desaturase(s), fatty acid acetylenases, lipoxygenases, triacylglycerol lipases, allenoxide synthases, hydroperoxide lyases or fatty acid elongase(s). The nucleic acid construct comprises additional biosynthesis genes of the fatty acid or lipid metabolism selected such as Delta4-desaturase, Delta5-desaturase, Delta6-desaturase, Delta8-desaturase, Delta9-desaturase, Delta12-desaturase or Delta6-elongase. The transgenic non human organism is a microorganism, a non human animal or a plant (preferred). Preferred Method: (I) are isolated from the organism in the form of their oils, lipids or free fatty acids. (I) are isolated in a concentration of at least 1 weight% based on the total lipid content of the transgenic organism. The nucleic acid or gene construct further comprises a nucleic acid sequence encoding a polypeptide having Delta9-elongase activity comprising a sequence encoding the 18C-Delta9 elongase from Isochrysis galbana (SEQ ID Number 25) or Acanthamoeba castellanii (SEQ ID Number 24).
USE - The invention deals about the preparation of delta 5-unsaturated fatty acid compounds in an organism, which are useful in the food industry sector, cosmetic sector and preferably pharmacological industry sector.
ADVANTAGE - The method can produce sciadonic acid and juniperonic acid in organisms, where the acid: can be easily extracted; do not occur naturally in most food plants; is in bound form; and can be marketed directly without any need of oils, lipids or fatty acid synthesized to be isolated.
EXAMPLE - All coding regions corresponding to A. leveillei desaturases were inserted as Cla1/Cla1 fragments into the yeast pYES2.1 TOPO TA expression vector. Coding region corresponding to Isochrysis galbana 18C-Delta9-elongase, ASE1, was inserted as a Kpn1-BamH1 fragment into the pYES3 expression vector. Forward primers were designed to contain a G at position -3 and +4 to improve translation initiation in eukaryotic cells. Open reading frames encoding putative desaturation activities were introduced in S. cerevisiae strain W303-1A by a lithium acetate method. Cultures were grown at 22degreesC in the presence of 2% (v/v) raffinose and expression of the transgenes was induced by the addition of galactose to 2% (w/v) in the presence of 0.5 mM of the corresponding fatty acid and 1% (w/v) tergitol - Nonidet P-40 (Sigma) as described. Yeast transformants containing pYES2-derived constructs were grown on synthetic minimal medium minus uracil; pYES3-derived constructs were grown on minimal medium minus tryptophan. Co-transformed yeast was grown on minimal medium minus uracil and tryptophan. All coding regions were placed in CaMV 35S promoter-nos terminator expression cassettes for plant transformation to produce delta unsaturated fatty acids.(68 pages)

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=> s acyl-CoA:lysophospholipid acyltransferase and (C16 or C18 or C20 or C22)
L4          13 ACYL-COA:LYSOPHOSPHOLIPID ACYLTRANSFERASE AND (C16 OR C18 OR
               C20 OR C22)

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5           5 DUP REM L4 (8 DUPLICATES REMOVED)

=> d l5 1-5 ibib ab

L5   ANSWER 1 OF 5  HCAPLUS  COPYRIGHT 2007 ACS on STN
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ACCESSION NUMBER: 2006:656755 HCAPLUS Full-text
DOCUMENT NUMBER: 145:140122
TITLE: Genes for lysolecithin acyltransferase sequence homologs and their use in the manufacture of polyunsaturated fatty acids in transgenic organisms
INVENTOR(S): Cirpus, Petra; Bauer, Joerg; Heinz, Ernst; Abbadi, Amine; Kirsch, Jelena
PATENT ASSIGNEE(S): BASF Plant Science GmbH, Germany
SOURCE: PCT Int. Appl., 98 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006069936	A2	20060706	WO 2005-EP56957	20051220
WO 2006069936	A3	20070322		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
DE 102004062294	A1	20060706	DE 2004-102004062294	20041223
AU 2005321344	A1	20060706	AU 2005-321344	20051220
CA 2591599	A1	20060706	CA 2005-2591599	20051220
EP 1831358	A2	20070912	EP 2005-821795	20051220
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
CN 101072869	A	20071114	CN 2005-80041980	20051220

PRIORITY APPLN. INFO.: DE 2004-102004062294A 20041223
WO 2005-EP56957 W 20051220

AB Genes for homologs of acyl-CoA:lysophospholipid-acyltransferases of algae are cloned and characterized for use in the development of transgenic organisms manufacturing long chain polyunsatd. fatty acids for food and therapeutic use. Cloning of a cDNA for the acyl-CoA: lysophospholipid-acyltransferase of Ostreococcus tauri using primers derived from the gene for the enzyme of Caenorhabditis elegans is described.

L5 ANSWER 2 OF 5 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 1998181115 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 9514659
TITLE: Substrate specificity of acyl-CoA: Lysophospholipid acyltransferase (LAT) from pig spleen.
AUTHOR: Kerkhoff C; Habben K; Gehring L; Resch K; Kaever V
CORPORATE SOURCE: Institut fur Molekularpharmakologie, Medizinische Hochschule Hannover, Hannover, 30623, Germany.
SOURCE: Archives of biochemistry and biophysics, (1998 Mar 15) Vol. 351, No. 2, pp. 220-6.

Journal code: 0372430. ISSN: 0003-9861.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199804
ENTRY DATE: Entered STN: 30 Apr 1998
Last Updated on STN: 30 Apr 1998
Entered Medline: 20 Apr 1998

AB The present investigation was undertaken to gain insights into the nature of both substrate binding sites of acyl-CoA: lysophospholipid acyltransferase (LAT) which could be potentially useful for the identification and purification of this specific acyltransferase. Therefore, we have investigated the specificity of LAT from crude membranes of pig spleen toward various 1-palmitoyl-glycerophospholipids and 1-acyl-glycerophosphocholines (1-acyl-GPC). The enzyme showed the highest specificity toward 1-acyl-GPC and was able to distinguish between the acyl-chain length of the 1-acyl group within the 1-acyl-GPC molecule. We found preferential reactivity in the order C10:0 < C12:0 << C14:0, C18:0,. C16:0 < C18:1 of 1-acyl-GPC. Lysophosphatidic acid or 1-O-alkyl-GPC were only poor substrates for the enzyme. In competition studies we could show that palmitic acid, oleic acid, arachidonic acid, and palmitoyl-CoA competitively inhibited LAT activity, whereas the coenzyme A failed to inhibit LAT enzyme activity in a concentration-dependent manner. We concluded that the ligand acyl-CoA is bound via its acyl chain. The finding that palmitoyl-CoA was a poor substrate as well as an inhibitor was the basis for protein purification. When palmitoyl-CoA-agarose was used as matrix for affinity chromatography, LAT enzyme activity was bound and eluted by high salt concentrations yielding an estimated 10-fold purification of the solubilized LAT enzyme. Copyright 1998 Academic Press.

L5 ANSWER 3 OF 5 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 97420680 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 9276665
TITLE: Acyltransferases and transacylases involved in fatty acid remodeling of phospholipids and metabolism of bioactive lipids in mammalian cells.
AUTHOR: Yamashita A; Sugiura T; Waku K
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Teikyo University, Kanagawa.. ayamashi@pharm.teikyo-u.ac.jp
SOURCE: Journal of biochemistry, (1997 Jul) Vol. 122, No. 1, pp. 1-16. Ref: 149
Journal code: 0376600. ISSN: 0021-924X.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199710
ENTRY DATE: Entered STN: 21 Oct 1997
Last Updated on STN: 6 Feb 1998
Entered Medline: 6 Oct 1997

AB Over 100 different phospholipid molecular species are known to be present in mammalian cells and tissues. Fatty acid remodeling systems for phospholipids including acyl-CoA: lysophospholipid acyltransferases, CoA-dependent and CoA-independent transacylation systems and lysophospholipase/transacylase are involved in the biosynthesis of these molecular species. Acyl-CoA:1-acyl-2-lysophospholipid acyltransferase prefers polyunsaturated fatty acyl-CoAs as acyl donors while acyl-CoA:2-acyl-1-lysophospholipid acyltransferase prefers

saturated fatty acyl-CoAs. Therefore, the acyl-CoA: lysophospholipid acyltransferase system is involved in the synthesis of the phospholipid molecular species containing sn-1 saturated and sn-2 unsaturated fatty acids. The CoA-dependent transacylation system catalyzes the transfer of fatty acids esterified in phospholipids to lysophospholipids in the presence of CoA without the generation of free fatty acids. The CoA-dependent transacylation reaction in rat liver exhibits strict fatty acid specificity, i.e., three types of fatty acids (20:4, 18:2, and 18:0) are transferred. On the other hand, the CoA-independent transacylase catalyzes the transfer of C20 and C22 polyunsaturated fatty acids from diacyl phospholipids to various lysophospholipids, in particular, ether-containing lysophospholipids, in the absence of any cofactors. The CoA-independent transacylase is assumed to be involved in the accumulation of polyunsaturated fatty acids in ether-containing phospholipids and in the removal of deleterious ether-containing lysophospholipids. These acyltransferases and transacylases are involved in not only the remodeling of fatty acids but also the synthesis and degradation of some bioactive lipids and their precursors. In this review, the properties of these fatty acid remodeling systems and their possible roles in the biosynthesis of bioactive lipids are described.

L5 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1988:527811 HCAPLUS Full-text
DOCUMENT NUMBER: 109:127811
TITLE: Kinetic parameters of lysophospholipid acyltransferase systems in diet-induced modifications of platelet phospholipid acyl chains
AUTHOR(S): Murase, Shigeo; Yamada, Kazuyo; Okuyama, Harumi
CORPORATE SOURCE: Fac. Pharm. Sci., Nagoya City Univ., Nagoya, 467, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1988), 36(6), 2109-17
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Competitive effectiveness and relative Km values of polyunsatd. fatty acids were determined in the acyl-CoA: lysophospholipid acyltransferase systems in platelet membranes. Some CoA esters of fatty acids such as 18:2n-6 (linoleic), 18:3n-3 (α-linolenic), 18:3n-6, 20:3n-6 (dihomo-γ-linolenic) and 20:5n-3 (eicosapentaenoic) were found in vitro to be relatively good competitive inhibitors of arachidonate (20:4n-6) incorporation into phosphatidylcholine, while in the acylation of lysophosphatidylinositol, 18:2n-6, 20:2n-6, 20:3n-6, 20:5n-3 and 22:4n-6 were relatively good inhibitors. When vegetable oil-supplemented diets rich in 18:2n-6 or 18:3n-3 were fed to rats, these fatty acids were converted to highly unsatd. fatty acids, such as 20:4n-6 and 20:5n-3, and were esterified to phospholipids in platelets. The kinetic parameters determined in vitro were useful in roughly predicting the relative abundance of eicosanoid precursors (20:4n-6 and 20:5n-3), but not that of C18 polyunsatd. fatty acids. Arachidonate was conserved but n-3 fatty acids were excluded relatively more strictly in phosphatidylinositol than in phosphatidylcholine in platelets of rats on diets containing different proportions of 18:2n-6 and 18:3n-3.

L5 ANSWER 5 OF 5 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 1987:465869 BIOSIS Full-text
DOCUMENT NUMBER: PREV198784111309; BA84:111309
TITLE: PROTECTION BY VERAPAMIL OF MITOCHONDRIAL GLUTATHIONE EQUILIBRIUM AND PHOSPHOLIPID CHANGES DURING REPERFUSION OF ISCHEMIC CANINE MYOCARDIUM.

AUTHOR(S): KAJIYAMA K [Reprint author]; PAULY D F; HUGHES H; YOON S B; ENTMAN M L; MCMILLIN-WOOD J B
CORPORATE SOURCE: DIV CARDIOVASCULAR DISEASE, DEP MED, UNIV ALABAMA BIRMINGHAM, UNIV STN, BIRMINGHAM, ALABAMA 35294, USA
SOURCE: Circulation Research, (1987) Vol. 61, No. 2, pp. 301-310. CODEN: CIRUAL. ISSN: 0009-7330.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 7 Nov 1987
Last Updated on STN: 7 Nov 1987

AB Pretreatment of the ischemic myocardium with verapamil protects against mitochondrial respiratory depression observed during ischemic arrest as well as during reperfusion. Since ischemic mitochondrial function appears not to be altered further by reperfusion, the purpose of this study is to identify a biochemical event affecting mitochondria that is specifically associated with reperfusion injury. It has been proposed that increased cellular Ca2+ influx and oxygen toxicity may result from reintroduction of coronary flow. Increased cytosolic Ca2+ is transmitted to the mitochondria with subsequent activation of Ca2+-dependent events, including phospholipase A2. Net production of lysophospholipids (and loss of total diacylphospholipids from the mitochondria) will proceed when reacylation mechanisms are inhibited. Since acyl-CoA: lysophospholipid acyltransferase is a sulfhydryl-sensitive enzyme and since increased activity of glutathione peroxidase shifts the levels of the mitochondrial sulfhydryl buffer, glutathione, towards oxidation, levels of glutathione and its oxidation state were measured during reperfusion in the absence or presence of verapamil pretreatment. Ischemia lowers total glutathione and reduces the redox ratio (reduced glutathione:oxidized glutathione) by 85%. Reperfusion partially returns the redox ratio to control by causing oxidized glutathione to disappear from the matrix. Verapamil maintains both the concentration and the redox potential of glutathione at control levels. Concomitant with alterations in reduced glutathione:oxidized glutathione is a decrease in ischemic mitochondrial phospholipid content. During reperfusion, phosphatidylethanolamine and its major constituent fatty acids (C18:0 and C20:4) are specifically lost from the mitochondrial membrane. Accompanying the significant loss of arachidonic acid during reperfusion is the decreased content of 11-OH, 12-OH, and 15-OH arachidate. These lipid peroxidation products are not increased in ischemia. It is proposed that oxidation of matrix glutathione to glutathione disulfide during ischemia results in formation of glutathione-protein mixed disulfides and inhibition of sulfhydryl-sensitive proteins, including acyl-CoA lysophosphatide acyltransferase. Thus, metabolic events occurring within the ischemic period set the stage for prolonged dysfunction during reperfusion.

=> s acyl-CoA:lysophospholipid acyltransferase and dna
L6 1 ACYL-COA:LYSOPHOSPHOLIPID ACYLTRANSFERASE AND DNA

=> d l6

L6 ANSWER 1 OF 1 BIOTECHDS COPYRIGHT 2007 THE THOMSON CORP. on STN
AN 2007-14918 BIOTECHDS Full-text
TI Preparation of delta 5-unsaturated fatty acid compounds in an organism, useful in e.g. food industry sector, comprises introducing into an organism, lipid compounds and a nucleic acid sequence; and expressing the nucleic acid sequence;
involving vector-mediated gene transfer and expression in host cell
AU NAPIER J A; SAYANOVA O; ZANK T

PA BASF PLANT SCI GMBH
PI EP 1790731 30 May 2007
AI EP 2006-124663 23 Nov 2006
PRAI GB 2006-12109 19 Jun 2006; GB 2005-23915 24 Nov 2005
DT Patent
LA English
OS WPI: 2007-435839 [42]

=> s acyl-CoA:lysophospholipid acyltransferase and nucleic acid
2 FILES SEARCHED...
L7 3 ACYL-COA:LYSOPHOSPHOLIPID ACYLTRANSFERASE AND NUCLEIC ACID

=> d l7 1-3 ibib ab

L7 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:857694 HCAPLUS Full-text
DOCUMENT NUMBER: 141:344590
TITLE: Method for producing polyunsaturated fatty acids, lipids, and oils in transgenic organisms expressing fungal acyltransferases
INVENTOR(S): Renz, Andreas; Bauer, Joerg; Frentzen, Margit; Soezer, Nursen; Keith, Stobart; Fraser, Thomas; Lazarus, Colin M.; Qi, Baoxiu; Abbadi, Amine; Heinz, Ernst
PATENT ASSIGNEE(S): University of Bristol, UK
SOURCE: PCT Int. Appl., 270 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004087902	A2	20041014	WO 2004-EP3224	20040326
WO 2004087902	A3	20050303		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004225838	A1	20041014	AU 2004-225838	20040326
CA 2520795	A1	20041014	CA 2004-2520795	20040326
EP 1613746	A2	20060111	EP 2004-723591	20040326
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
US 2006174376	A1	20060803	US 2005-552013	20050930

PRIORITY APPLN. INFO.:
DE 2003-10314759 A 20030331
DE 2003-10348996 A 20031017
WO 2004-EP3224 W 20040326

AB The invention relates to a method for the production of long-chained, multiply unsatd. fatty acids in an organism, wherein nucleic acids coding for proteins with acyltransferase activity are introduced into the organism. Said nucleic acid sequences can be advantageously expressed in the organism, optionally

together with other nucleic acid sequences encoding enzymes involved in the biosynthesis of fatty acids or in lipid metabolism The invention also relates to a method for the production of oils and/or triacylglycerides with an increased content of long-chained, multiply unsatd. fatty acids. The invention further relates to the nucleic acid sequences, vectors containing the nucleic acid sequences, and transgenic organisms containing the above-mentioned nucleic acid sequences or vectors. The invention addnl. relates to oils, lipids and/or fatty acids produced according to the inventive method and to the utilization thereof in feed, food, cosmetics, and pharmaceuticals. Thus, lysophosphatidic acid acyltransferase, glycerol-3-phosphate acyltransferase, diacylglyerol acyltransferase, and lecithin-cholesterol acyltransferase of Thraustochytrium, Physcomitrella patens, Cryptothecodinium cohnii, Mortierella alpina, Shewanella hanedai, and Fusarium graminearum and the corresponding cDNAs are disclosed. Acyl CoA: lysophospholipid acyltransferase cDNAs of Caenorhabditis elegans were cloned, sequenced, and expressed in yeast, tobacco, and flax and the alteration of the lipid profile was determined The fungal acyltransferases were expressed in A. thaliana, tobacco, flax, and rape.

L7 ANSWER 2 OF 3 BIOTECHDS COPYRIGHT 2007 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2007-14918 BIOTECHDS Full-text
TITLE: Preparation of delta 5-unsaturated fatty acid compounds in an organism, useful in e.g. food industry sector, comprises introducing into an organism, lipid compounds and a nucleic acid sequence; and expressing the nucleic acid sequence;
involving vector-mediated gene transfer and expression in host cell
AUTHOR: NAPIER J A; SAYANOVA O; ZANK T
PATENT ASSIGNEE: BASF PLANT SCI GMBH
PATENT INFO: EP 1790731 30 May 2007
APPLICATION INFO: EP 2006-124663 23 Nov 2006
PRIORITY INFO: GB 2006-12109 19 Jun 2006; GB 2005-23915 24 Nov 2005
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2007-435839 [42]
AB DERWENT ABSTRACT:
NOVELTY - Preparation of delta 5-unsaturated fatty acid compounds (I) in an organism, comprises introducing into an organism, lipid compounds (III), and at least one nucleic acid sequence (A); and expressing the nucleic acid sequence.
DETAILED DESCRIPTION - Preparation of delta 5-unsaturated fatty acid compounds (I) (R1-C(=O)-(CH2)3-CH=CH-Ya) in an organism, comprises introducing into an organism, lipid compounds (III) of formula (R1-C(=O)-(CH2)3-CH2-CH2-Ya), and at least one nucleic acid sequence comprising SEQ ID Number 1, 3 or 5 (comprising one of 3 fully defined amino acid 939-1131 base pair sequences given in the specification), a nucleic acid sequence, which hybridizes under stringent conditions with a nucleic acid sequence of SEQ ID Number 1, 3 or 5, a nucleic acid sequence which encodes a polypeptide of SEQ ID Number 2, 4 or 6 or a derivative of a nucleic acid sequence of SEQ ID Number 1, 3 or 5, which encodes a polypeptide with at least 40% identity at the amino acid level with SEQ ID Number 2, 4 or 6 (comprising one of 3 fully defined amino acid 312-376 base pair sequences given in the specification), where the polypeptide has Delta5-desaturase activity; and expressing the nucleic acid sequence. Ya = 10-18C hydrocarbon chain containing up to four carbon-carbon double bonds; R1 = OH, coenzyme A (thioester), lysophosphatidylcholine, lysophosphatidylethanolamine, lysophosphatidylglycerol, lysodiphosphatidylglycerol, lysophosphatidylserine, lysophosphatidylinositol, sphingo base or a radical of formula R2-O-CH2-CH(-

O-R3)-CH2-O-; either R2 = H, lysophosphatidyl choline, lysophosphatidylethanolamine, lysophosphatidylglycerol, lysodiphosphatidylglycerol, lysophosphatidylserine, lysophosphatidylinositol or optionally saturated 2-24C-alkylcarbonyl; and R3 = H, optionally saturated 2-24C-alkylcarbonyl; or R2, R3 = a radical of the formula -C(=O)-(CH2)n-(CH=CH-CH2)m-(CH2)p-CH3; n = 2-7 or 9; m = 2-6; and p = 0 or 3. An oxygen in the R1 radical may be replaced by sulfur such that is bonded to the remainder of the molecule via a thioester linkage. INDEPENDENT CLAIMS are included for: (1) the preparation of sciadonic acid, juniperonic acid or their derivatives in an organism, which comprises linoleic (18C:2 n-6) or linolenic (18C:3 n-3) acid, comprising introducing into an organism (A) having at least one nucleic acid sequence encoding a polypeptide having delta9 elongase activity; and expressing the nucleic acid sequences;(2) oil, lipid or fatty acid, or their fractions, produced by the process; (3) an oil, lipid or fatty acid composition comprising the oil, lipid or fatty acid, which is derived from transgenic plants; (4) a process for the production of oils, lipids or fatty acid compositions by mixing the oils, lipids or fatty acids with animal oils, lipids or fats; (5) an isolated nucleic acid sequence, which encodes a polypeptide with Delta5-desaturase activity and is SEQ ID Number 1, 3 or 5; (6) a derivative of a nucleic acid sequence of SEQ ID Number 1, 3 or 5, which encodes a polypeptide with at least 40% identity at the amino acid level with SEQ ID Number 2, 4 or 6, where the polypeptide has Delta5-desaturase activity; (7) an amino acid sequence which is encoded by the nucleic acid sequence; (8) a nucleic acid construct comprising the nucleic acid sequence, operably linked with one or more regulatory sequences; (9) a vector comprising the nucleic acid or a gene construct; and (10) a transgenic non human organism comprising at least one nucleic acid , the gene construct or the vector. BIOTECHNOLOGY - Preferred Components: The nucleic acid sequence encoding a polypeptide having Delta9 elongase activity comprises a sequence encoding the 18C-Delta9 elongase from Isochrysis galbana (SEQ ID Number 25 (comprising a fully defined 777 base pair sequence given in the specification)) or Acanthamoeba Casterllanii (SEQ ID Number 24 (comprising a fully defined 891 base pair sequence given in the specification)). The transgenic organism is a transgenic microorganism or a transgenic plant. The transgenic organism is an oil-producing plant, a vegetable plant or an ornamental. The transgenic plant is a plant family of Adelotheciaceae, Anacardiaceae, Asteraceae, Apiaceae, Betulaceae, Boraginaceae, Brassicaceae, Bromeliaceae, Caricaceae, Cannabaceae, Convolvulaceae, Chenopodiaceae, Crypthecodiniaceae, Cucurbitaceae, Ditrichaceae, Elaeagnaceae, Ericaceae, Euphorbiaceae, Fabaceae, Geraniaceae, Gramineae, Juglandaceae, Lauraceae, Leguminosae, Linaceae or Prasinophyceae. The nucleic acid construct comprises additional biosynthesis genes of the fatty acid or lipid metabolism such as acyl-coenzyme A dehydrogenase(s), acyl-acyl carrier protein (ACP) desaturase(s), acyl-ACP thioesterase(s), fatty acid acyltransferase(s), acyl-CoA: lysophospholipid acyltransferase(s), fatty acid synthase(s), fatty acid hydroxylase(s), acetyl-coenzyme A carboxylase(s), acylcoenzyme A oxidase(s), fatty acid desaturase(s), fatty acid acetylenases, lipoxygenases, triacylglycerol lipases, allenoxide synthases, hydroperoxide lyases or fatty acid elongase(s). The nucleic acid construct comprises additional biosynthesis genes of the fatty acid or lipid metabolism selected such as Delta4-desaturase, Delta5-desaturase, Delta6-desaturase, Delta8-desaturase, Delta9-desaturase, Delta12-desaturase or Delta6-elongase. The transgenic non human organism is a microorganism, a non human animal or a plant (preferred). Preferred Method: (I) are isolated from the organism in the form of their oils, lipids or free fatty acids. (I) are isolated in a concentration of at least 1 weight% based on the total lipid content of the transgenic organism. The nucleic acid or gene construct further comprises a nucleic acid sequence encoding a polypeptide having Delta9-elongase activity comprising a sequence encoding the 18C-Delta9 elongase from Isochrysis galbana (SEQ ID Number 25) or Acanthamoeba castellanii (SEQ ID Number 24).

USE - The invention deals about the preparation of delta 5-unsaturated fatty acid compounds in an organism, which are useful in the food industry sector, cosmetic sector and preferably pharmacological industry sector.
ADVANTAGE - The method can produce sciadonic acid and juniperonic acid in organisms, where the acid: can be easily extracted; do not occur naturally in most food plants; is in bound form; and can be marketed directly without any need of oils, lipids or fatty acid synthesized to be isolated.
EXAMPLE - All coding regions corresponding to A. leveillei desaturases were inserted as Cla1/Cla1 fragments into the yeast pYES2.1 TOPO TA expression vector. Coding region corresponding to Isochrysis galbana 18C-Delta9-elongase, ASE1, was inserted as a Kpn1-BamH1 fragment into the pYES3 expression vector. Forward primers were designed to contain a G at position -3 and +4 to improve translation initiation in eukaryotic cells. Open reading frames encoding putative desaturation activities were introduced in S. cerevisiae strain W303-1A by a lithium acetate method. Cultures were grown at 22degreesC in the presence of 2% (v/v) raffinose and expression of the transgenes was induced by the addition of galactose to 2% (w/v) in the presence of 0.5 mM of the corresponding fatty acid and 1% (w/v) tergitol - Nonidet P-40 (Sigma) as described. Yeast transformants containing pYES2-derived constructs were grown on synthetic minimal medium minus uracil; pYES3-derived constructs were grown on minimal medium minus tryptophan. Co-transformed yeast was grown on minimal medium minus uracil and tryptophan. All coding regions were placed in CaMV 35S promoter-nos terminator expression cassettes for plant transformation to produce delta unsaturated fatty acids.(68 pages)

L7 ANSWER 3 OF 3 BIOTECHDS COPYRIGHT 2007 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2006-25842 BIOTECHDS Full-text
TITLE: To produce polyunsaturated long chain fatty acids, for use in foodstuffs or cosmetics or pharmaceuticals, nucleic acids are introduced in transgenic organisms coded for specific polypeptides;
polyunsaturated long chain fatty acid production via genetically engineered microorganism for food and pharmaceutical
AUTHOR: CIRPUS P; BAUER J; HEINZ E; ABBADI A; KIRSCH J
PATENT ASSIGNEE: BASF PLANT SCI GMBH
PATENT INFO: WO 2006069936 6 Jul 2006
APPLICATION INFO: WO 2005-EP56957 20 Dec 2005
PRIORITY INFO: DE 2004-102004062294 23 Dec 2004; DE 2004-102004062294 23 Dec 2004
DOCUMENT TYPE: Patent
LANGUAGE: German
OTHER SOURCE: WPI: 2006-717162 [74]
AB DERWENT ABSTRACT:
NOVELTY - To produce polyunsaturated long chain fatty acids in transgenic organisms, nucleic acids are introduced into the organism coded for polypeptides with an acyl-CoA:
lysophospholipid-acyltransferase activity. The nucleic acid sequences can be expressed in the transgenic organism either with other nucleic acid sequences coded for polypeptides of the fatty acid or lipid metabolism. Polyunsaturated fatty acids are isolated from the organism in the form of oils, lipids or a free fatty acid. The organism is a microorganism of a non-human animal or plant.
USE - The oil, lipid or fatty acid is for use in fodder, foodstuff, cosmetics or pharmaceuticals.
ADVANTAGE - The technque gives a simple and inexpensive production process to give polyunsaturated fatty acids in eukaryontic systems.(98 pages)

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     (FILE 'HOME' ENTERED AT 11:43:41 ON 03 DEC 2007)

     FILE 'MEDLINE, HCAPLUS, BIOSIS, BIOTECHDS, SCISEARCH, EMBASE' ENTERED AT
     11:44:17 ON 03 DEC 2007
L1             2 S ACYL-COA:LYSOPHOSPHOLIPID ACYLTRANSFERASE AND CAENORHABDITIS
L2             2 DUP REM L1 (0 DUPLICATES REMOVED)
L3             1 S ACYL-COA:LYSOPHOSPHOLIPID ACYLTRANSFERASE AND DNA
L4            13 S ACYL-COA:LYSOPHOSPHOLIPID ACYLTRANSFERASE AND (C16 OR C18 OR
L5             5 DUP REM L4 (8 DUPLICATES REMOVED)
L6             1 S ACYL-COA:LYSOPHOSPHOLIPID ACYLTRANSFERASE AND DNA
L7             3 S ACYL-COA:LYSOPHOSPHOLIPID ACYLTRANSFERASE AND NUCLEIC ACID

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COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                79.57      79.78

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
                                                   ENTRY    SESSION
CA SUBSCRIBER PRICE                                -3.90      -3.90

STN INTERNATIONAL LOGOFF AT 11:56:49 ON 03 DEC 2007
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L6 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2007 ACS on STN
RN 39433-94-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN Acyltransferase, lysophospholipid (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Acyl-CoA:acylglycerophospholipid acyltransferase
CN Lysophospholipid acyltransferase
CN Lysophospholipid palmitoyltransferase
MF Unspecified
CI MAN
LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, TOXCENTER, USPATFULL

FILE 'REGISTRY' ENTERED AT 13:53:31 ON 03 DEC 2007

L1 0 S ACYL-COA:LYSOPHOSPHOLIPID ACYLTRANSFERASE
L2 0 S ACYL-COA:LYSOPHOSPHOLIPID-ACYLTRANSFERASE
L3 0 S ACYLCOA:LYSOPHOSPHOLIPID ACYLTRANSFERASE
L4 0 S ACYL-COA LYSOPHOSPHOLIPID ACYLTRANSFERASE
L5 0 S ACYL-COA: LYSOPHOSPHOLIPID ACYLTRANSFERASE
L6 3 S LYSOPHOSPHOLIPID ACYLTRANSFERASE

FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE' ENTERED AT 14:00:46 ON 03 DEC 2007

L7 239 S (ACYL-COA:ACYLGLYCEROPHOSPHOLIPID ACYLTRANSFERASE OR LYSOPHO
L8 102 DUP REM L7 (137 DUPLICATES REMOVED)
L9 3 S L8 AND CAENORHABDITIS
L10 0 S L8 AND DNA
L11 0 S L8 AND DNA
L12 1 S L8 AND NUCLEIC ACID

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Search Results - Record(s) 1 through 5 of 5 returned.

☐ 1. Document ID: US 20070261138 A1

L3: Entry 1 of 5 File: PGPB Nov 8, 2007

PGPUB-DOCUMENT-NUMBER: 20070261138
PGPUB-FILING-TYPE:
DOCUMENT-IDENTIFIER: US 20070261138 A1

TITLE: Synthetase Enzymes

PUBLICATION-DATE: November 8, 2007

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Graham; Ian Alexander	York		GB
Tonon; Thierry	Roscoff		FR

US-CL-CURRENT: 800/295; 435/257.2, 435/320.1, 435/410, 530/350, 554/30

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 2. Document ID: US 20070224661 A1

L3: Entry 2 of 5 File: PGPB Sep 27, 2007

PGPUB-DOCUMENT-NUMBER: 20070224661
PGPUB-FILING-TYPE:
DOCUMENT-IDENTIFIER: US 20070224661 A1

TITLE: Method for Producing Unsaturated Omega-3-Fatty Acids in Transgenic Organisms

PUBLICATION-DATE: September 27, 2007

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Cirpus; Petra	Mannheim		DE
Bauer; Jorg	Ludwigshafen		DE
Zank; Thorsten	Mannheim		DE
Heinz; Ernst	Hamburg		DE

US-CL-CURRENT: 435/69.1; 435/243, 435/320.1, 536/23.1, 800/278, 800/295

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 3. Document ID: US 20070136892 A1

L3: Entry 3 of 5 File: PGPB Jun 14, 2007

PGPUB-DOCUMENT-NUMBER: 20070136892
PGPUB-FILING-TYPE:
DOCUMENT-IDENTIFIER: US 20070136892 A1

TITLE: Process for the production of delta5-unsaturated fatty acids in transgenic organisms

PUBLICATION-DATE: June 14, 2007

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Zank; Thorsten	Mannheim		DE
Napier; Johnathan A.	Hertfordshire		GB
Sayanova; Olga	St. Albans		GB

US-CL-CURRENT: 800/281; 435/128, 435/134, 435/190, 435/419, 435/468, 536/23.2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 4. Document ID: US 20060174376 A1

L3: Entry 4 of 5 File: PGPB Aug 3, 2006

PGPUB-DOCUMENT-NUMBER: 20060174376
PGPUB-FILING-TYPE:
DOCUMENT-IDENTIFIER: US 20060174376 A1

TITLE: Novel plant acyltransferases specific for long-chained, multiply unsaturated fatty acids

PUBLICATION-DATE: August 3, 2006

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Renz; Andreas	Limburgerhof		DE
Bauer; Jorg	Ludwigshafen		DE
Frentzen; Margit	Aachen		DE
Sozer; Nursen	Ubach-Palenberg		DE
Keith; Stobart	Bristol		GB

US-CL-CURRENT: 800/281; 435/134, 435/419, 435/468, 536/23.2, 554/8

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 5. Document ID: US 20060168687 A1

L3: Entry 5 of 5 File: PGPB Jul 27, 2006

PGPUB-DOCUMENT-NUMBER: 20060168687
PGPUB-FILING-TYPE:

DOCUMENT-IDENTIFIER: US 20060168687 A1

TITLE: Method for the production of polyunsaturated fatty acids

PUBLICATION-DATE: July 27, 2006

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Renz; Andreas	Limburgerhof		DE
Heinz; Ernst	Hamburg		DE
Abbadi; Amine	Hamburg		DE
Domergue; Frederic	Hamburg		DE
Zank; Thorsten	Mannheim		DE

US-CL-CURRENT: 800/281; 424/401, 435/134, 435/193, 435/254.2, 435/320.1, 435/419, 435/69.1, 536/23.2, 554/8

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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Terms	Documents
L2 and dna	5

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WEST Search History

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DATE: Monday, December 03, 2007

Hide?	Set Name	Query	Hit Count
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☐	L5	L4 and acyl-CoA:lysophospholipid acyltransferase	0
☐	L4	435/194.ccls.	2373
☐	L3	L2 and dna	5
☐	L2	L1 and Caenorhabditis elegans	5
☐	L1	acyl-CoA:lysophospholipid acyltransferase	6

END OF SEARCH HISTORY